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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/302,375

04/30/1999

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13118

6808

7590

09/08/2004

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EXAMINER

NGUYEN, STEVEN H D

ART UNIT

PAPER NUMBER

2665

DATE MAILED: 09/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/302,375

Applicant(s)

CHAPMAN ET AL.

Examiner

Steven HD Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 6/15/04.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-14, 36 and 39-43 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14, 36 and 39-43 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Election/Restrictions***

1. This application contains claims 15-35 and 37-38 drawn to an invention nonelected with traverse in the reply filed on 2/14/03. A complete reply to the final rejection must include cancelation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.
2. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.
4. Claims 1-14, 36 and 39-43 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

As claims 1, 8, 36 and 43, “extracting a portion of the contents of the respective packet to serve as the packet identifier, wherein *the portion of the contents of the respective packet is not specifically designates for packet identification purposes within the respective packet*”.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 8, 36 and 39-43 are rejected under 35 U.S.C. 102(b) as being anticipated by Buchholz (USP 5337313).

Regarding claims 1, 8, 36 and 43, Buchholz discloses (Fig 1-16 and col. 1, lines 5 to col. 12, lines 26) a transmission device (Fig 1, Ref 12 or 10) for forwarding aggregate traffic streams towards a destination point (Fig 1, Ref 12 or 10), an aggregate traffic stream being comprised of a plurality of packets said transmission device (Fig 3) comprising an input for receiving the aggregate traffic streams (Fig 1, Ref 10 or 12 includes an input for receiving the packet stream from the sources 14); an output for forwarding the aggregate traffic streams to the destination point (Fig 1, Ref 10 or 12 has an output for transmitting the packet streams); a control unit operative to generate for each packet of each aggregate traffic stream passing from said input to said output a unique packet identifier for distinguishing the respective packet from all of the other packets by extracting at least a portion of the contents of the respective packet to serve as said packet identifier, wherein said at least a portion of the contents of the respective packet is

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not specifically designated for packet identification purposes within the respective packet; maintain a record of the generated packet identifiers; forward the aggregate traffic streams to the destination point without adding any data elements to the packets of the aggregate traffic streams (Col 3, lines 25-41, Fig 1, Ref 12 or 10 has an control unit for extracting the information from the packet and generating a packet identifier which includes source ID and sequence number and storing the identified of packet in the memory; then transmitting the data packet of the source without adding any data element to the data packet that generated by the source).

Regarding claims 39 and 41, Buchholz discloses at least a portion of the contents of the respective packet is a bit sequence (a packet which is generated from the source includes a packet number; See col. 1, lines 54 to col. 2, lines 33)

Regarding claims 40 and 42, Buchholz discloses calculating a corresponding sequence number for each generated packet identifier, said method further comprises mapping each sequence number to the respective packet identifier in said data structure (Col 3, lines 25-41).

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 2-7 and 9-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Buchholz in view of Davies (USP 6483805).

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Regarding claims 2-7 and 9-14, Buchholz discloses (Fig 1-16 and col. 1, lines 5 to col. 12, lines 26) the transmission device receiving an acknowledge message from the destination point (Fig 11, Ref 1116) which corresponds to the stored values in the memory having a data structure, said control unit being operative to record said-generated packet identifiers in said data structure (Fig 11, Ref 1112). However, Buchholz does not fully disclose control unit has an input for receiving acknowledgement messages issued from the destination point to notify said transmission device that a certain packet released from said output has been received at the destination point, each acknowledgement message conveying information relative to a particular one of said packet identifiers, said control unit being further operative to process successive acknowledgement messages received from the destination point in conjunction with said record of packet identifiers for regulating a rate at which packets are released from said output. In the same field of endeavor, Davies discloses (Figs 1-6 and col. 1, lines 14 to col. 12, lines 40) a transmission device (Fig 1, Ref 10) for receiving the aggregate traffic streams, each comprises a plurality of packets, each has an identifier and forwarding the streams to the destination point and comprising a control unit (Fig 1, Ref 10a) for receiving an ack message from the destination point to notify the transmission device that a certain packet released from the transmission device has been received at the destination point and the control unit uses the ack message to regulate a rate at which packets are released from transmission device and a data structure for recording the identifiers of packets and comparing with the ack message to identify which packets has been received and loss at the destination point in order to regulate the flow rate by progressively increasing the rate if the destination received a packet and decreasing the rate if the destination point has not receives at least one packet (Fig 1, Ref 10b and Col 8, lines 25 to col. 9, lines 44).

Since, Buchholz suggests the use of window for transmitting the packet between the devices. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to apply a method and system for controlling the flow of information between the devices based on the ack message and recorded transmitted data packet between the devices as disclosed by Davies into Buchholz. The motivation would have been to improve the throughput of output port.

9. Claims 1-14, 36 and 39-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davies (USP 6483805) in view of Bellaton (USP 6473425).

Regarding claims 1-14, 36 and 39-43, Davies discloses (Figs 1-6 and col. 1, lines 14 to col. 12, lines 40) a transmission device (Fig 1, Ref 10) for forwarding aggregate traffic streams towards a destination point (Fig 1, Ref 10), an aggregate traffic stream being comprised of a plurality of packets said transmission device comprising an input for receiving the aggregate traffic streams (Fig 1, Ref 10 includes an input for receiving the packet streams); an output for forwarding the aggregate traffic streams to the destination point without adding any data elements to the packets of the aggregate traffic streams (Fig 1, Ref 10 has an output for transmitting the packet streams); control unit has an input for receiving acknowledgement messages issued from the destination point to notify said transmission device that a certain packet released from said output has been received at the destination point, each acknowledgement message conveying information relative to a particular one of said packet identifiers, said control unit being further operative to process successive acknowledgement messages received from the destination point in conjunction with said record of packet identifiers for regulating a rate at which packets are released from said output; process said data structure in

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conjunction with successive acknowledgement messages received from the destination point to regulate the rate at which packets are released from said output in order to determine whether packets forwarded to the destination point have not been received at the destination point; if at least one packet has not been received at the destination point, said control unit is operative to reduce a rate of release of the packets from said output; progressively increase a rate of release of the packets from said output until a packet is not received at the destination point (Col 8, lines 25 to col. 9, lines 44); However, Davies fails to disclose a control unit operative to generate for each packet of each aggregate traffic stream passing from said input to said output a unique packet identifier for distinguishing the respective packet from all of the other packets by extracting at least a portion of the contents of the respective packet to serve as said packet identifier, wherein said at least a portion of the contents of the respective packet is not specifically designated for packet identification purposes within the respective packet; maintain a record of the generated packet identifiers. In the same field of endeavor, Bellaton discloses (Fig 1-11 and col. 1, lines 5 to col. 11, lines 3) a router (Fig 9) which includes a controller (Fig 9, Ref 112) for generate for each packet of each aggregate traffic stream passing from said input to said output a unique packet identifier for distinguishing the respective packet from all of the other packets by extracting at least a portion of the contents of the respective packet to serve as said packet identifier, wherein said at least a portion of the contents of the respective packet is not specifically designated for packet identification purposes within the respective packet; maintain a record of the generated packet identifiers (Fig 9, Ref 114) in a data structure, said control unit being operative to record said-generated packet identifiers in said data structure; at least a portion of the contents of the respective packet is a bit sequence and calculating a corresponding



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sequence number for each generated packet identifier, said method further comprises mapping each sequence number to the respective packet identifier in said data structure (Fig 10 is a data structure for storing the packet identifier which is extracted from the packet header; See Fig 9, Ref 112 for extracting the source, destination ID and packet sequence number for generating packet identifier and storing in the queue control record 114; See Fig 10 and col. 8, lines 53 to col. 9, lines 20).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to apply a method and system for generating a packet identifier based on the extracted information from the packet header for storing in the data structure as disclosed by Bellaton into Davies's system and method. The motivation would have been to improve a throughput of the system.

#### ***Response to Arguments***

10. Applicant's arguments filed 4/1/04 have been fully considered but they are not persuasive.

In response to pages 2-10, the applicant states that the prior arts do not disclose a method and system for extracting a portion of the contents of the respective packet to serve as the packet identifier, wherein the portion of the contents of the respective packet is not specifically designates for packet identification purposes within the respective packet and without adding any data elements to the packets of the aggregate traffic streams. In reply, Buchholz discloses a method and system for preserving the sequential relation of plurality of data packets which generated by a plurality of source devices by extracting the source information in the packet and

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using it to generate a data packet sequence for identifying the data packet and forwarding the data packet without adding any data element in the data packet by transmitting data packets and the source information and data packet sequence information separately as set forth in the office action, section 6. Davies discloses a method and system for transmitting data packet without adding any information to data packet as set forth in the office action section 9. Bellaton discloses a method and system for receiving the data packets and extracting the header and generated a packet identifier for storing in the buffer before forwarding the data packets onto output link; See col. 8, lines 54 to col. 9, lines 20. The node uses these stored identifier packet for controlling the retransmitting data packet between the source and destination. So the teaching of Buchholz, Davies and Belatton perform the claims.

### ***Conclusion***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Harper (USP 6700871) discloses a method and system for using ip address and packet sequence number to improve network throughput.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven HD Nguyen whose telephone number is (571) 272-3159. The examiner can normally be reached on 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy D Vu can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'SH', with a long horizontal line extending to the right.

Steven HD Nguyen  
Primary Examiner  
Art Unit 2665  
8/27/04